**Y2 – Test Recap Task**

**Programs to get you started are here: P:\A level Computing\Y2 Test Programs**

**The BHASVIC Pseudocode Guide is also in this folder.**

**Task 1**

1. Open the file: 1\_QueueAlgorithm
2. Use this to write code for Adding and Removing items of data from the queue structure.

* Add should check for overflow
* Remove should check for underflow

1. Write out pseudocode for Q1 of test:

“Describe an algorithm to insert one item of data into a queue structure”

**Task 2**

1. Open the file: 2\_RandomLetters
2. Use this to write working code for the ValidateAnswer function required to answer Q7 in the test.

NB – my code uses a global char (string) array for randomLetters instead of passing the string array.

1. Produce a pseudocode version of the function for Q7 of the test

“Complete the function validateAnswer.

function validateAnswer(answer, randomLetters[ ]) “

**Task 3**

1. Open the file: 3\_DisplayBoard
2. Use this to write the code for the updateDisplay procedure in Q6.
3. Write out pseudocode to answer Q6 of the test.

“Write the procedure updateDisplay. Credit will be given for the readability of your code.  
You can assume:

* Message contain no punctuation
* All message will fit on the display
* The previous message has been removed before this procedure is run”

global array display[20,4]  
.  
.  
procedure updateDisplay(words)

**Task 4** - Using links on the VLE page in the Sorts & Searches topic (and the internet if necessary), fill in the table below.

**Use the data set:** 84 12 61 32 7 15 95 43

|  |  |
| --- | --- |
| **Bubble sort**  **Time Complexity:**  **Type of sort:**  **Steps: (at least 4)**  **Demonstration with data set:**  **Advantage(s):**  **Disadvantage(s):** | **Quick sort**  **Time Complexity:**  **Type of sort:**  **Steps: (at least 4):**  **Demonstration with data set:**  **Advantage(s):**  **Disadvantage(s):** |
| **Insertion Sort**  **Time Complexity:**  **Type of sort:**  **Steps: (at least 4):**  **Demonstration with data set:**  **Advantage(s):**  **Disadvantage(s):** | **Merge Sort**  **Time Complexity:**  **Type of sort:**  **Steps: (at least 4):**  **Demonstration with data set:**  **Advantage(s):**  **Disadvantage(s):** |